



THE UNIVERSITY OF VERMONT
EXTENSION

Technical Services for the Payment of Ecosystem Services and Soil Health Working Group Overview

October 5th, 2021



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Who are we?

- Heather Darby, Project Director & Primary Investigator
 - Extension Professor & Agronomy Specialist at the University of Vermont, Fellow at the Gund Institute for Environment
- Alissa White, Project Coordinator
 - Post Doctoral Research Associate at the University of Vermont, Gund Institute for Environment
- Jon Winsten
 - Economist and PES Expert , Conservation Performance LLC
- Taylor Ricketts
 - Professor and Director of the Gund Institute for Environment, University of Vermont
- Ben Dube
 - UVM graduate student
- Noah El-Naboulsi
 - Research Assistant, farmer, has an MS from Plymouth State
- Possible 2nd research assistant who is a Vermont Law School alum
- Additional expertise from UVM, Extension & Gund Institute



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Soil health metrics and scenarios

Task 1: Soil Health Metrics

Soil Health Metrics Report: Summarize options for modeling and measuring the metrics determined by working group

- **Work with direction and input from soil health task group to build on the matrix that has been developed**

Task 2: Soil Health Scenarios

Soil Health Scenario Report: Build scenarios to illustrate how Vermont farm management influences soil health performance. Focus these scenarios on the soil health metrics identified by the PES Soil Health Task Group

- **Working group consults on scenario selection and identification of existing data from local research**



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Soil health valuation

Task 3: Contingent valuation survey & focus groups

Survey: Captures preferred and minimum level of payment farmers would be willing to accept

Focus Groups: Participatory analysis with farmers. Report to the working group includes key insights, challenges and issues with payment rates and program design options.

- **Farmers first approach**
- **Participant compensation**
- **Opportunity to ask additional questions deemed critical by working group**
- **Working group members refine survey questions and help circulate survey to farming community**



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Soil health valuation

Task 4: Economic Cost of Implementation

Cost Spreadsheet: Calculates the range of full economic cost to farmer per unit of soil health.

Task 5: Ecosystem Services Valuation Study

Ecosystem Services Valuation Study Report: Uses ecological economics and ecosystem services approaches to evaluate the way increases in soil health benefit society in multiple ways.



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Reviews of programs and methods

Task 6: Review of
Performance Based
Soil Health Programs

Performance-based PES review report: Summarizes 7-12 performance-based or soil health programs in other states and countries with relevant models for the PES Working Group in a report and summary table.

Task 7: Explore Whole
Farm Approaches

Whole-farm PES approaches report: Summarizes methodologies, protocols and a case study in whole farm assessments of ecosystem services, with a focus on net-zero carbon footprints. Combines systematic literature review methods with expert interviews to explore the methods, challenges and opportunities involved in conducting net ecosystem services provisioning assessments at the whole farm scale

- **Working group members consults to identify programs and models to be included.**



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Program structure options

Task 8: Program Structure Options

Program design options guide & presentation: Engage with the PES WG in an on-going and collaborative manner to provide clarity and recommendations on crucial PES program structure options, including:

- Eligibility,
 - Quantification methodology,
 - Baselines/additionality,
 - Incentive structure,
 - Monitoring and verification
-
- **Extent of input from working group is flexible.**



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What this collaboration means to us

- Our work is done in service to the working group
- We'll provide updates at PES Working Group meetings.
- We will be focused on following through with the tasks and completing the contract.
- We need your input and involvement as partners.
- Information will be delivered in as timely a way as possible.
- We will provide information, you make the decisions.
- We'll provide structured opportunities to shape and input on the work.
- We are open to unstructured input, but may not be able to integrate all of it.
- Our goal is to engage in helping make the work outlined in this contract as relevant and useful to the WG decision-making process as possible.

	Tasks	Deliverables	Timeline
	Executed Contract	Signed Contract	Sept 30, 2021
Measuring soil health	Task 1: Soil Health Metrics	Soil Health Metrics Report: Summarizes options for modeling and measuring the metrics determined by working group	Nov 15, 2021
	Task 2: Soil Health Scenarios	Soil Health Scenario Report: Build scenarios to illustrate how Vermont farm management influences soil health performance. Focus these scenarios on the soil health metrics identified by the PES Soil Health Task Group	Dec 1, 2021
Economic analyses	Task 3: Stakeholder Engagement & Contingent Valuation	Survey Report: Captures preferred and minimum level of payment farmer would be willing to accept Focus Group Report: Describes participatory analysis with farmers, key insights, challenges and issues with payment rates and program design options.	April 1, 2022
	Task 4: Economic Cost of Implementation	Cost Spreadsheet: Calculates the range of full economic cost to farmer per unit of soil health.	Dec 1, 2021
	Task 5: Ecosystem Services Valuation Study	Ecosystem Services Valuation Study Report: use ecological economics and ecosystem services approaches to evaluate the way increases in soil health benefit society in multiple ways.	Dec 15, 2021
Program design	Task 6: Review of Performance-Based Soil Health Programs	Performance-based PES review report: Summarizes performance-based programs in other states and countries with relevant models for the PES Working Group in a report and summary table.	Dec 1, 2021
	Task 7: Explore Whole Farm Approaches	Whole-farm PES approaches report: Summarizes methodologies, protocols and a case study in whole farm assessments of ecosystem services, with a focus on net-zero carbon footprints	Jan 1, 2021
	Task 8: Program Structure Options	Program design options guide & presentation: assesses and illuminates key program structure options, including: Eligibility, Quantification methodology, Baselines/additionality, Incentive structure, Monitoring and verification, Duration of participation	Dec 15, 2021
	Task 9: Communications & Engagement	Attendance at regular PES Working Group meetings, virtual or in-person	Ongoing
	Final Report	Final Report	May 30, 2022



Thank you.

Please reach out with
any questions or
ideas!

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